



BIOrhythms

Washington University Biology Department Newsletter

November 2014

“The function of education is to teach one to think intensively and to think critically. Intelligence plus character - that is the goal of true education.”

—Martin Luther King, Jr.

Helpful Links

Biology Home Page
Biology Course Listings
Faculty Listings

BIOrhythms is a publication of the Washington University Biology Department for Undergraduate Majors

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Featured in this issue:

Faculty Spotlight: Dr. Garland Allen

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Student Groups: JCUBES, Synapse

Calendar: Biology Events and links to event listings



Faculty Spotlight: Garland Allen *-reprinted from 10/12*



2010, in the Drakenberg Mountains, South Africa, where Gar Allen was hiking with some friends from the University of Durban, Zulu-Natal.

Dr. Garland Allen is a bit different than most of the professors in the biology department. His research is focused on the history and philosophy of biology rather than on benchwork experiments. He grew up in Louisville, KY and received his undergraduate degree in biology at the University of Louisville, followed by attending graduate school for a year at Harvard to complete a Master of Arts in Teaching degree (MAT) in 1958. For the following three years he taught biology at the Northfield-Mount Hermon Schools in western

Massachusetts. This is where he *really* learned a lot about the field of biology and became fascinated by the changes taking place in the field and in teaching at the time. This was just the time when biology was becoming molecular and new courses were just beginning to incorporate this approach, replacing the old descriptive, “romp through the plant and animal phyla.” This experience led to his decision to finish his PhD in Harvard’s History of Science department, focused on the history of genetics and its relation to embryology and evolution in the twentieth century. He taught at Harvard for two years before joining Wash U as an Assistant Professor.

At that time, it was unusual for someone in the field of the history of science to get a position in a science department. However Wash U faculty members Tom Hall and Viktor Hamburger shared Gar’s interest in using a historical and philosophical approach to teach science more effectively, so he was hired to teach the combined majors-minors course (Bio 101-102, including labs), later a non-majors course (Bio 105-106) —*cont’d on p. 2*

WASHINGTON UNIVERSITY CAREER CENTER

Locations:

Danforth University Center,
Suite 110 with satellite of-
fices in Lopata Hall, Brauer
Hall and Steinberg Hall

Main Office Hours in the
Danforth University Center:
Monday-Friday: 8:30-5:00

Contact Us:

Phone: 314.935.5930

Fax: 314.935.5905

E-mail: careers@wustl.edu

Website: careercenter.wustl.edu

Have a Quick Question?

You can always stop by the
Career Center's Quick
Question hours in the main
office Monday-Friday, 11am-
5pm for assistance with
CAREERlink, writing your
resume and cover letters, or
for quick guidance.

UPCOMING CAREER CENTER EVENTS

Winter Road Shows: Apply by Dec. 1

Road Shows are your oppor-
tunity to meet with organi-
zations across the country.

The trips focus on a city and
an industry and are open to
all Washington University
students. Road Shows are
two days over winter break
and include meetings with
select organizations. Apply
for a Winter Break Road
Show in Chicago, New York,

—CONT'D ON NEXT PAGE

Faculty Spotlight Cont'd—and later Bio 296A. Along with these assignments he taught a variety of history of biology courses as well as a course on the scientific revolution. During this period Gar co-authored a series of introductory biology texts that went through four editions, incorporating the historical approach, explaining how we know what we know.

Research funded by the National Science Foundation and other institutional grants over many years has allowed Gar to amass an amazing collection of archival documents about the history of genetics. These have been invaluable in preparing a biography of T.H. Morgan and a study of the development of the life sciences as a whole in the 20th century. These are also valuable for classes in which students read primary source material, for example, this semester in Bio 3183: A History of Genetics in the Twentieth Century. This course basically covers the evolution of ideas about heredity from the post-Darwin period to the end of the century. It provides not only a history of how ideas about the nature of the gene and other aspects of genetics itself developed, but also provides a window on how biology as a whole went from being a “little science”, fairly low in the hierarchy of the sciences (compared to Physics for example, which is quantitative, with laws and predictive power) to its high standing, with a strong experimental, quantitative (and mathematical) and predictive base today.

Gar Allen's personal hobbies include hiking and backpacking in the mountains, tennis (until recently, anyway), and a love for music. He has hosted radio shows on local stations in the 1970s and 1980s, including one, “Music and Musicians” on KFUEO which focused on a specific composer, genre or performer each week, in which examples would be tied together with a narrative. My own interactions and experiences with him have always been a pleasure. He is a great conversationalist. On top of that he is so dedicated to his work that practically no mishap keeps him from coming in with a cheerful smile for everyone he passes in the hall. —*Erin Gerrity*

Garland Allen Reflects on His Time Teaching at Wash U

Looking back over my 47 years in the Biology Department, I am struck by three things: (1) The congenial atmosphere created by my colleagues and staff in the department, and their willingness to discuss biology in general and my work in particular, on numerous occasions; (2) The exciting group of students with whom I interacted, either in classes or as an advisor, who really made teaching both fun and challenging; and (3) The increasing interest in history of science developing in other parts of the university, most notably the Philosophy Department, at the recently-established Center for the History of Medicine at the Medical School, and in other universities in the area, especially UMSL and Webster. All of this has made WashU, and St. Louis, a very fruitful place in which to work.

As mentioned in the previous write-up, it was unusual in 1967 for a historian/philosopher of science to get a mainstream job in a science/biology department. But it was a great fit, because I had, and continued through 1980s, to write several introductory biology texts that I could test out with students. I thoroughly enjoy teaching biology as a process of inquiry using examples from the history of science to show earlier investigators had thought about a problem, and found ways to approach it experimentally. Despite periodic complaints from pre-meds who thought they should be learning only the most recent information for the MCATs, using an historical approach was interesting for most students, and successful in getting them to think scientifically. My colleagues in the department were always supportive and encouraging in this line of teaching. —*cont'd on p. 3*



Hiking trip with philosophers and historians of biology at Fraser Island, Australia, 2009, prior to an international meeting in Brisbane

Gar Allen Cont'd—Teaching biology also kept me honest about knowing the details of the science in ways I felt sometimes my colleagues in history or philosophy departments did not always carry out.

Students have always been at the heart of my academic experience, and that is one aspect of retirement that I will definitely miss. Students here have always shown enthusiasm, interest and shared their own great perspectives on issues as detailed as mechanisms of enzyme action to the misuse of science for political ends (as in the eugenics movement in the early 20th century). One of my most exciting teaching experiences was a writing-intensive seminar-style course on the history of eugenics. Students have always kept me on my toes and challenged me in ways that often my colleagues did not. The sheer enthusiasm that many students showed for learning new things was a real spearhead motivating me daily to find better ways of teaching or pursuing my scholarly projects. Teaching and interacting with students

has always been, for me, something that fuels research, and of course the process works in the opposite direction as well. So I have found at WashU one of the best and most productive mixes I could imagine to keep me perpetually motivated. Some say teaching keeps you young (in spirit, at any rate) and I agree completely.

The growing number of faculty at WashU and other local institutions interested in, and supportive of, the history and philosophy of science has indicated how important this area of study is becoming, especially to people in the sciences. My hope is that the Biology Department will be able to hire someone with similar interests who can help bridge the gap between the sciences and humanities and social sciences that are part of the broad liberal arts curriculum.

One parting glance: In many ways it is a wonder that I am still at WashU after all this time. In the late 1960s and 1970s (through the 1990s) I was involved in a series of political movements that at several critical points could have cost me my job. Before I had tenure, I took a 6-month leave (1970) to go to Cuba and help with their sugar-cane harvest, becoming a convinced Marxist in the process by seeing how an egalitarian society can function (I was on the way before, which is one reason I went). Involved with various protest groups and organizations back here -- Science for the People, International Committee Against Racism and several other more short-lived groups -- I got arrested at a couple of demonstrations (none on campus, though many students did), much to the university's chagrin (actually, displeasure), and taught several courses (one with Danny Kohl and Barry Commoner) examining from a radical point of view how science had been brought into the service of capitalism, colonialism and imperialism (we dared criticize Monsanto and Ralston-Purina). This was a great learning experience, and taught me the importance of combining theory with practice. —*Gar Allen*

Career Center cont'd—Silicon Valley, Seattle, or Washington D.C.

Career and Internship Connections (CIC): Jan 6 – 9

These off-campus events held in Boston, Los Angeles, New York, and Washington, D.C. are an excellent opportunity to network and interview face-to-face for entry-level jobs and internships with a variety of employers. Submit your resume via the CIC website by December 1 to be considered for interviews. Students are still encouraged to attend if they do not register by that date. Password token: 'cic2015'.

Spring 2015 All-Campus Internship & Job Career Fair: Jan 27

The fair will take place from 3 to 7 p.m. in Mallinckrodt Center. Students can view registered organizations, research positions, and sign up for employer-hosted information sessions by logging into CAREERlink.

For more upcoming events, go to: careers.wustl.edu/events



Undergraduate Research Fellowships in Ecology and the Environment

Info meeting:
Thursday, Nov 20 5-7pm,
DUC 233, free pizza

Are you interested in a summer research experience in field ecology?

Learn about summer research opportunities for undergraduates interested in ecology and environmental biology, including numerous options at Washington University's field station, Tyson Research Center. Paid fellowships are available. Many undergraduate research projects become senior theses and result in scientific publications, and many research fellows continue on to graduate school.

Do You Have...

An announcement you'd like to make?

An interesting story or fun fact you'd like to share?

A professor or course you'd like to suggest for a spotlight?

We want your input! Send ideas and information to:

gerrity@biology2.wustl.edu



Journal Club for Undergraduates in Biological Engineering and Sciences (JCUBES), our school's undergraduate research forum, hosts biweekly presentations on various topics related to the life sciences. JCUBES is currently looking for undergraduate students who may be interested in presenting on scientific research in the spring semester.

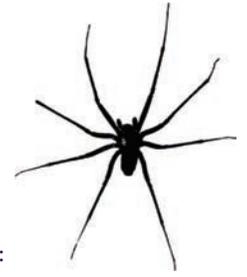
What do presenters talk about? The short answer is anything and everything! However, if you are not sure where to begin, JCUBES typically asks presenters to talk about something they are interested in by presenting the experiments and results of a journal publication. The topics can range anywhere from computer science to biochemistry to psychology, including everything in between.

How do I get involved? Email wustljcubes@gmail.com or visit wustljcubes.wordpress.com for more information. If you don't want to present, but are still interested in attending meetings, ask to be put on the JCUBES mailing list to receive biweekly updates on upcoming events. The Department of Biology and the Department of Biomedical Engineering generously provide free pizza at all of our meetings.

Synapse student group plans for Neuroweek 2015: Neuroweek will take place from February 2-6, 2015. Synapse is planning a bunch of awesome events such as the ones listed below! Please check out Synapse's website <http://synapse.wustl.edu/> or Facebook page for more details as the date gets closer!

- Mind Melt - Getting back into the swing of classes can be very stressful, so Synapse wants to help WU students by providing a relaxing environment and remind them to care for themselves and their mental health.
- Surgery Screening - Professor of Neurological surgery attending and resident neurosurgeon come to Washington University to put together a video-based PowerPoint showing surgical highlights from a recent case. The presentation will include patient history and physical, imaging, differential diagnostic considerations, description of surgery and then edited video showing surgical highlights. The presentation will ultimately allow students to have a fun and interactive experience virtually shadowing the OR.
- Sleep Lecture - Understanding circadian rhythm is something many college students learn through experience, but Synapse will provide the opportunity for our sleep-deprived peers to learn about sleep from the experts from Washu med school. We will have sleep doctors from the sleep center come to the Danforth campus for an evening lecture, which will be open to the entire student body. They will learn about their own circadian rhythm, better sleeping habits, how stress and other factors affect sleep cycles, and will have the opportunity to ask questions of the sleep doctors.
- NeurOlympics - Neuroscience/psychology trivia night in which teams of 3-4 students can compete to win prizes.

Biology Department Calendar



Links to General Calendars and Regular Events:

Washington University Record Calendar: <http://news.wustl.edu/Pages/Calendar.aspx>

Biology Department Seminars, Mondays, 4:00pm, Rebstock 322, check the website for topics/schedule:
<http://wubio.wustl.edu/events>

Evolution, Ecology, & Population Biology Seminars, Thursdays, 4:00pm, Rebstock 322, check the website for topics/schedule: http://wubio.wustl.edu/events?field_event_tags_tid=18

History & Philosophy of Science Seminar Series: <http://pages.wustl.edu/hpbm/events>

PMB Super Group: most Tuesdays 9:00-10:00 in McDonnell 362: <http://wubio.wustl.edu/events/pmb-supergroup-seminar-series>

Donald Danforth Plant Science Center (DDPSC), Weekly Seminar Series—check the website for event details and topics:
<http://www.danforthcenter.org/events/scientific-seminars>

Division of Biology and Biomedical Sciences (DBBS), all lectures and seminars: <http://dbbs.wustl.edu/Pages/Events.aspx>

November 2014

26th Thanksgiving Break

12th FINAL EXAMS begin



December 2014

5th Last day of classes

8th Reading period begins

11th Final Exams begin

January 2015

12th First day of classes

19th Dr. Martin Luther King Jr Holiday-NO CLASSES

27th Last day to add/wait/change courses for Spring 2015

27th Last day to drop/D courses for Spring 2015 courses

